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CHRISTOPHER DEVRIES			YANG, CLARA I	
General Motors Corporation			ART UNIT	
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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/643,731

Applicant(s)

HUNTZICKER, FRED W.

Examiner

Clara Yang

Art Unit

2635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-20 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 08/19/2003
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Allowable Subject Matter*

1. Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### *Claim Objections*

2. Claims 1 and 14 are objected to because of the following informalities:
  - Claim 1: Change "turns the switch ON" to "turns a switch ON" in line 12 due to insufficient antecedent basis for the switch, and change "by a switch" to "by the switch" in line 14.
  - Claim 14: Change "further comprising following the transmitting step" to "further comprising prior to the transmitting step" because the applicant teaches in Fig. 6 and Section [0032] that operation of system 20 and module 10 is placed in the "secure" mode prior to transmitting a radio frequency (RF) command, such as "open" or "unlock".

Appropriate correction is required.

3. Claim 8 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Per MPEP § 608.01(n)(III), a proper dependent claim shall include every limitation of the claim from which it depends (35 USC 112, fourth paragraph). In other words, a proper dependent claim shall not conceivably be infringed by anything that would not also infringe the claim from which it depends. Claim 1, from which claim 8 depends, calls for a first system portion and a second system portion, wherein the second system portion comprises a memory, a processor, and a transmitter. Claim 8, however, calls for either or both of the memory and processor of claim 1 to be part of the first system portion instead of the

Art Unit: 2635

second system portion, thereby enabling claim 8 to be infringed by something that would not infringe claim 1. Consequently, claim 8 is of improper dependent form.

*Claim Rejections - 35 USC § 112*

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The applicant's invention, as defined in claim 1, is contradicted by claim 8. Claim 1 calls for (1) a first system portion comprising a keypad and a detector and (2) a second system portion comprising a memory, a processor, and a transmitter. Claim 8 renders the invention unclear (i.e., indefinite) by calling for either or both of the memory and processor to be part of the first system portion instead of the second system portion.

*Claim Rejections - 35 USC § 102*

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 11-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Rangan (US 5,955,981).

Rangan teaches a remote controlled system comprising a vehicle and a remote keyless device 100, which is shown in Figs. 1 and 2. As illustrated in Fig. 2, remote keyless device 100 has: (1) button assembly 110 or keypad (see Col. 2, lines 55-64 and Col. 3, lines 24-28); (2) a

Art Unit: 2635

keystroke detector (see Col. 3, lines 24-34 and Col. 5, lines 38-43); (3) transmission control unit 115 or processor (see Col. 2, lines 65-67 and Col. 3, lines 1-11); (4) security code register 205 or memory (see Col. 3, lines 15-24); and (5) a power switch (see Col. 3, lines 28-31 and Col. 5, lines 38-43). Rangan's power switch must be connected to remote keyless device 100's transmitter in order for the transmitter to transmit a selected signal (see Col. 3, lines 5-11). Rangan teaches that US Patent 4,754,255 (Sanders et al.) is fully incorporated by reference. Sanders's transmitter is a radio frequency (RF) transmitter (see Col. 10, lines 1-15); thus it is understood that Rangan's remote keyless device 100 transmits RF signals.

Referring to claim 11, Rangan teaches a method, as shown in Fig. 3, comprising the steps of: (a) detecting a first keystroke at step 305 (see Col. 3, lines 28-34 and Col. 5, lines 38-43); (b) turning on remote keyless device 100 at step 305 (i.e., turning the power switch ON) in response to detecting a first keystroke (see Col. 5, lines 38-43); (c) receiving multiple keystrokes from button assembly 110 at step 305 (see Col. 3, lines 28-34 and Col. 5, lines 38-48); (d) comparing the received keystrokes to the contents of security code register 205 at step 320 (see Col. 3, lines 55-59 and Col. 5, lines 51-53); and (e) transmitting an RF signal containing an unlock (i.e., OPEN) command to the vehicle if the match is identified at steps 370 and 380 (see Col. 3, lines 59-62; Col. 4, lines 24-28 and 67; Col. 5, lines 1-4; and Col. 6, lines 9-12 and 20-23).

Regarding claim 12, Rangan's method, as shown in Fig. 3, also includes step 310 of starting a time delay after receiving the first keystroke and step 300 of turning off the power when the time delay expires (see Col. 4, lines 34-40 and 50-54; Col. 5, lines 54-59; and Col. 6, lines 35-40).

Regarding claim 13, still referring to Fig. 3, Rangan's method also comprises step 320 of determining if further valid keystrokes are being received or not after turning on remote keyless

Art Unit: 2635

device 100 and steps 325, 330, and 300 of turning off remote keyless device 100 if valid keystrokes have not been received (see Col. 4, lines 50-54 and Col. 5, lines 51-59).

Regarding claim 14, Rangan teaches that remote keyless device 100 is in an "armed mode" (i.e., secure mode) prior to receiving a command keystroke and transmitting the command to the vehicle (see Fig. 3, steps 365, 370, and 380; Col. 4, lines 34-40; and Col. 6, lines 5-12).

Regarding claim 15, Rangan teaches that remote keyless device 100 is attached to a key holder (see Col. 1, lines 20-23); thus remote keyless device 100 is a fob-type keyless entry device. Per Rangan, remote keyless device 100 transmits an RF signal to a responsive vehicle door lock (see Col. 1, lines 53-55; Col. 2, lines 62-64; Col. 4, lines 24-28; Col. 6, lines 9-12 and 20-23).

Regarding claim 16, Rangan teaches that remote keyless device 100, which includes system 200 and transmission control unit 115, is turned on when a user presses a first button 125, 130, 135, or 140 (see Col. 3, lines 28-34 and Col. 5, lines 38-43); thus system 200 and transmission control unit 115 are turned on when a first keystroke is detected by power on circuit 213. As shown in Fig. 2, system 200 is a processor that includes security code register 205 and entered code register 215 (i.e., memories); hence Rangan's step of turning on the power comprises turning on the power to both system 200 and its registers.

Regarding claim 17, Rangan's comparing step comprises code comparator 210 retrieving the code in security code register 205 (i.e., memory) and then comparing them to the received keystrokes stored in and retrieved from entered code register 215 (see Fig. 2; Col. 3, lines 55-65; and Col. 5, lines 51-53).

*Claim Rejections - 35 USC § 103*

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-6, 10, and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lambropoulos (US 5,442,341) in view of Rangan (US 5,955,981).

Referring to claims 1, 5, and 6, Lambropoulos teaches a transmitting unit T, as shown in Fig. 1A. Regarding claim 1, Lambropoulos's transmitting unit T comprises: (a) a battery providing Vcc (see Col. 4, lines 52-55); and (b) a first system portion receiving power during an "active" state (i.e., depression of switch 12, 14, or 16) or "inactive state (i.e., no depression of switch 12, 14, or 16) and comprising (1) switches 12, 14, and 16, which form a keypad having at least one key that provides an electric signal to power up circuit 20, and (2) power-up circuit 20, which is coupled to switches 12, 14, and 16 via line 18 and turns on the rest of transmitting unit T after intercepting a first keystroke (see Col. 4, lines 4-9, 30-31, and 49-57). Power-up circuit 20 must include a switch in order to provide power to the rest of transmitting unit T's components after detecting the depression of switch 12, 14, or 16 and to turn off the rest of transmitting unit T's components after a predetermined time period (see Col. 4, lines 4-9, 30-31, and 49-57); thus the depression of switch 12, 14, or 16 causes power-up circuit 20's switch to turn ON. Lambropoulos teaches that transmitting unit T also has (c) a second system portion coupled to the power source by power-up circuit 20's switch and receiving power therefrom only when power-up circuit 20's switch is ON, wherein the second system portion includes (1)

Art Unit: 2635

microcomputer 10 (i.e., processor), which is coupled to switches 12, 14, and 16 and has an internal EEPROM memory that stores a security code (i.e., valid actuation code) within security code register 40 (see Col. 4, lines 4-9 and 49-55; and Col. 5, lines 8-26), and (2) a transmitter formed by RF oscillator 30 and AND gate 39, wherein the transmitter transmits digital signal S that includes the security code and a valid unlock (i.e., OPEN) command recognizable by the vehicle (see Col. 4, lines 19-31 and 49-55; and Col. 5, lines 42-49). Lambropoulos, however, fails to teach: (1) a user entering a security code (i.e., actuation code) via switches 12, 14, and/or 16; and (2) microcomputer 10 receiving the security code entered by the user, comparing the entered security code with the one in security code register 40, and then causing the transmitter to transmit digital signal S, which includes a valid unlock command. Lambropoulos also fails to teach: (3) microcomputer 10 sending an instruction to power-up circuit 20 to cause power-up circuit 20 to shut its switch OFF when the entered security code fails to match with the one in security code register 40 (as called for in claim 5); and (4) transmitting unit T waiting an additional period of time to detect function codes (i.e., command instruction) received from switch 12, 14, or 16 before sending an instruction to power-up circuit 20 to cause its switch to turn off (as called for in claim 6).

In an analogous art, Rangan teaches a remote keyless device 100, as shown in Figs. 1 and 2, having: (a) power supply 120; (b) button assembly 110 (i.e., keypad) having at least one button that provides an electric signal representing security code 212 when depressed (see Col. 3, lines 24-34 and Col. 5, lines 38-48); (c) a detector coupled to button assembly 110 for intercepting at least a first keystroke of at least one button and turning on the rest of remote keyless device 100 in response to the keystroke (see Col. 3, lines 28-34 and Col. 5, lines 38-43); (d) security code register 205 or memory for storing security code 212 (i.e., actuation code)



Art Unit: 2635

therein (see Col. 3, lines 15-17 and 34-37); (e) system 200 (i.e., processor), which is coupled to security code register 205 and button assembly 110, for receiving an entered security code represented by keystroke sequences of button assembly 110 and comparing the entered security code with security code 212 retrieved from security code register 205 to detect a match (see Col. 3, lines 55-59 and Col. 5, lines 51-53); and (f) transmission control unit 115 coupled to system 200 for transmitting a signal that carries an operation, such as unlocking the vehicle door, when system 200 detects the match (see Col. 2, lines 65-67; Col. 3, lines 1-11; Col. 4, lines 24-28 and 34-40; Col. 5, lines 60-67; and Col. 6, lines 1-12). Though Rangan fails to expressly state that remote keyless device 100 has a switch for connecting/disconnecting system 200 and transmission control unit 115 to/from power supply 120, remote keyless device 100 must have a switch since system 200 and transmission control unit 115 are powered upon detection that button 125, 130, 135, or 140 has been depressed and are turned off after an "inactivity timeout" period has expired (see Col. 3, lines 28-34; Col. 5, 38-43 and 54-59; and Col. 6, lines 35-40). Rangan further teaches: (g) system 200's time delay switch 245 sending a command to turn off remote keyless device 100 when system 200 fails to detect a match (see Col. 3, lines 62-65 and Col. 5, lines 51-59), as called for in claim 5; and (h) system 200 waiting an additional period of time to detect additional depression of buttons 130, 135, or 140 before turning off remote keyless device 100 (see Col. 6, lines 5-12 and 20-40), as called for in claim 6.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify transmitting unit T of Lambropoulos as taught by Rangan because security is further improved by a transmitting unit T that validates a user prior to transmitting a signal that enables the user to access a vehicle (see Rangan, Col. 2, lines 9-39).

Art Unit: 2635

Regarding claim 2, as shown in Fig. 1A, Lambropoulos's transmitting unit T has antenna 36 coupled to the transmitter, which is formed by AND gate 39 and RF oscillator 30, for transmitting the RF digital signal S (see Col. 4, lines 14-31).

Regarding claim 3, as shown in Fig. 1C, Lambropoulos's transmitting unit T is contained in case 50, which has a key ring 52 on a swivel connection 54 that enables transmitting unit T to be attached to a vehicle via a key (see Col. 4, lines 63-68 and Col. 5, lines 1-7).

Regarding claim 4, Lambropoulos discloses that microcomputer 10 instructs power-up circuit 20 to shut off its switch after transmission of digital signal S (see Col. 4, lines 49-57). Because clock oscillator 32 is used to time the function of microcomputer 10 to shift output line 38 to a logic 1 whenever a binary 1 is to be transmitted by antenna 36 (see Col. 4, lines 19-22) and thus determines the duration of signal transmission (i.e., a predetermined interval), clock oscillator 32 is a timer that is coupled to power-up circuit 20's switch via microcomputer 10.

Regarding claim 10, Lambropoulos's transmitting unit T, as modified by Rangan, is a fob-type used for a remote keyless entry (RKE) system and transmits an RF signal after microcomputer 10 determines a match (see Col. 3, lines 52-68; Col. 4, lines 1-16; and Col. 5, lines 2-7).

Referring to claims 18 and 20, Lambropoulos teaches an RKE system comprising a transmitting unit T and a receiver unit R located in a vehicle (see Col. 3, lines 52-65). Regarding claim 18, Lambropoulos's transmitting unit T, as shown in Fig. 1A, comprises: (a) a battery providing Vcc (see Col. 4, lines 52-55); (b) power-up circuit 20 coupled to the battery and having a switch, as explained above in the rejection of claim 1, for turning on and off microcomputer 10, RF oscillator 39 and clock oscillator 32 (see Col. 4, lines 4-9, 30-31, and 49-57); (c) a keypad formed by switches 12-16 for providing an electronic signal when at least one switch is

Art Unit: 2635

depressed (see Col. 4, lines 4-9); and (d) power-up circuit 20 for intercepting the first keystroke of at least one switch 12, 14, or 16 and actuating power lines P by connecting the power lines to the battery via the switch within power-up circuit 20 (see Col. 4, lines 4-9, 30-31, and 49-57). As shown in Fig. 1A, power-up circuit 20 is coupled to the battery, and switches 12-16 must be connected to the battery in order to actuate power-up circuit 20 (see Col. 4, lines 4-9); thus switches 12-16 and power-up circuit 20 form a first system portion coupled to the battery and receiving power therefrom while the system is in an active or inactive state. Lambropoulos's transmitting unit T also has: (e) an EEPROM (i.e., memory) contained within microcomputer 10 and having a security code register 40 for storing a security code (i.e., actuation code) (see Col. 5, lines 8-10 and 17-26); and (f) microcomputer 10 coupled to the EEPROM's security code register 40, switches 12-16, and a transmitter formed by AND gate 39 and RF oscillator 30 (see Fig. 1A). Microcomputer 10, its internal EEPROM, and the transmitter form a second system coupled to power-up circuit 20 and receiving power from the battery via power-up circuit 20's switch only when the switch is on (see Col. 4, lines 4-9, 30-31, and 49-57). Lambropoulos, however, fails to teach: (1) a user entering a security code (i.e., actuation code) via switches 12, 14, and/or 16; and (2) microcomputer 10 receiving the security code entered by the user, comparing the entered security code with the one in security code register 40, and then causing the transmitter to transmit digital signal S, which includes a valid unlock command. Lambropoulos also fails to disclose transmitting unit T's transmitter sending another RF signal corresponding to at least one additional keystroke command sequence received via switches 12, 14, or 16 without comparing the command sequence with a stored code, as called for in claim 20.

Art Unit: 2635

In an analogous art, as previously explained in the rejection of claim 1, Rangan's system 200 (i.e., processor), which is coupled to security code register 205 and button assembly 110, receives an entered security code represented by keystroke sequences of button assembly 110 and compares the entered security code with security code 212 retrieved from security code register 205 to detect a match (see Col. 3, lines 55-59 and Col. 5, lines 51-53). Rangan adds that transmission control unit 115, which is coupled to system 200, transmits a signal that carries an operation, such as unlocking the vehicle door, when system 200 detects the match (see Col. 2, lines 65-67; Col. 3, lines 1-11; Col. 4, lines 24-28 and 34-40; Col. 5, lines 60-67; and Col. 6, lines 1-12). Rangan further teaches that remote keyless device 100 transmits command signals (e.g., a signal commanding the vehicle to unlock its doors) corresponding to the depression of buttons 130, 135, or 140 once remote keyless device 100 is in an "armed" mode and the armed mode duration period has yet to expire (see Fig. 3, steps 365, 370, 375, and 380; and Col. 6, lines 9-25). As shown in steps 370, 375, and 380, once remote keyless device 100 is in the armed mode, system 200 causes the transmission of command sequences without comparing the command sequence with security code 212 (see Col. 4, lines 64-67 and Col. 5, lines 1-4). Per Rangan, a user can cause remote keyless device 100 to send additional command signals after transmission of the first command as long as the secured-operations usage limit has not been exceeded and the armed mode duration period has yet to expire (see Col. 6, lines 9-25); thus Rangan's remote keyless device 100 sends out an additional signal corresponding to a subsequent command sequence received from buttons 125, 130, 135, and/or 140 without comparing the subsequent command sequence with security code 212, as called for in claim 20.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify transmitting unit T of Lambropoulos as taught by Rangan

Art Unit: 2635

because security is further improved by a transmitting unit T that validates a user prior to transmitting a signal that enables the user to access a vehicle (see Rangan, Col. 2, lines 9-39).

Regarding claim 19, as explained in the rejection of claim 4, Lambropoulos discloses that clock oscillator 32 is used to time the function of microcomputer 10 to shift output line 38 to a logic 1 whenever a binary 1 is to be transmitted by antenna 36 (see Col. 4, lines 19-22); thus clock oscillator 32 determines the duration of signal transmission (i.e., a predetermined interval). Clock oscillator 32 is turned on after one of switches 12-16 has been pressed, thus starting a predetermined interval, and causes microcomputer 10 to instruct power-up circuit 20 to turn off the second system portion when transmission of digital signal S has been completed (see Fig. 1A and Col. 4, lines 4-9 and 19-57), thus ending the predetermined interval that began after actuation of switches 12-16 has stopped.

10. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lambropoulos (US 5,442,341) in view of Rangan (US 5,955,981) as applied to claim 1 above, and further in view of Rho (US 4,757,304).

Regarding claims 7 and 8, Lambropoulos and Rangan's transmitting unit T lacks an additional ON/OFF switch coupled between the first system portion and the battery for disconnecting the battery from the first system portion when the system is to be inoperable, as called for in claim 7. In addition, Lambropoulos and Rangan are silent on microcomputer 10 being a part of the first system portion rather than the second system portion, as required in claim 8.

In an analogous art, Rho teaches transmitter for a vehicle security system, as shown in Fig. 1B, comprising: (a) battery  $V_D$  (see Col. 2, lines 45-47); (b) power switch S coupled between battery  $V_D$  and a first system portion formed by switches  $SW_1$ - $SW_3$ ,  $LED_2$ , and  $LED_3$  for

Art Unit: 2635

disconnecting the first portion from battery  $V_D$  (see Fig. 2B) when the system is intended to be inactive; (c) integrated circuit  $IC_1$  having a scanner (i.e., detector) for intercepting actuation of switches  $SW_1$ ,  $SW_2$ , or  $SW_3$  (see Col. 2, lines 50-52); (d)  $IC_1$  (i.e., processor) coupled to switches  $SW_1$ - $SW_3$  for generating a signal carrier and modulating the carrier with one of three different command inputs (see Col. 2, lines 45-59); and (e)  $IC_1$ , transistor  $Q_7$ ,  $LED_2$ , and  $LED_3$  forming a transmitter for transmitting a command signal (see Col. 2, lines 52-59). From Fig. 1B,  $IC_1$  is powered regardless if the transmitter is in an "active" state (i.e., when a user actuates switches  $SW_1$ ,  $SW_2$ , or  $SW_3$ ) or "inactive" state (i.e., when none of switches  $SW_1$ - $SW_3$  have been actuated) as long as power switch  $S$  is ON and therefore is part of the first system portion coupled to  $V_D$ .

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify transmitting unit  $T$  of Lambropoulos and Rangan as taught by Rho because power consumption is further reduced preventing switches 12-16 from being powered until a user intends to use transmitting unit  $T$ , thereby prolonging battery life. In addition, by turning on microcomputer 10 before transmitting unit  $T$  is in an active state allows microcomputer 10 to properly initialize before detecting a security code being entered via switches 12-16.

### *Conclusion*

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Weber (US 5,077,831) teaches means for protecting a transmitter from unauthorized use, wherein the transmitter has a keypad for a user to input a password, a memory for storing a valid password, and a processor for comparing the entered password with the one stored in the memory and allowing transmission of a signal if both passwords match.

Art Unit: 2635

- Burgess (US 6,617,975) teaches a wireless remote control transmitter including a keypad, which may be mounted on a vehicle's glass. Per Burgess, the transmitter only transmits a command after a user enters a valid password via the keypad.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clara Yang whose telephone number is (571) 272-3062. The examiner can normally be reached on 8:30 AM - 7:00 PM, Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on (571) 272-3068. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CY

  
Clara Yang